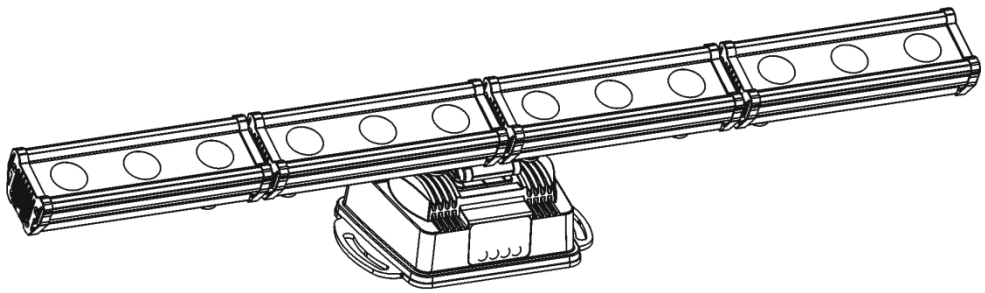
CityFlex 48

CityFlex 48

Wireless DMX **CRMX**™



USER MANUAL

ROBE® Lighting s.r.o. • Czech republic • www.robe.cz

Version 1.7

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FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY
BEFORE POWERING OR INSTALLING YOUR CityFlex 48 !
Save it for future reference.

This device has left our premises in absolutely perfect condition. In order to maintain this condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

Please consider that damages caused by manual modifications to the device are not subject to warranty.

1. Safety instructions

DANGEROUS VOLTAGE CONSTITUTING A RISK OF ELECTRIC SHOCK IS PRESENT WITHIN THIS UNIT!

Make sure that the available voltage is not higher than stated on the rear panel of the fixture.
This fixture should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied, consult your authorized distributor or local power company.

Always disconnect the fixture from AC power before cleaning, removing or installing the fuses, or any part.

Do not overload wall outlets and extension cords as this can result in fire or electric shock.

Make sure that the power cord is never crimped or damaged by sharp edges. Check the fixture and the power cord from time to time.

Do not install the unit near naked flames.

During the operation the housing becomes hot (up to 80°C)

Refer servicing to qualified service personnel.

<u>This fixture falls under protection class I</u>. Therefore this fixture has to be connected to a mains socket outlet with a protective earthing connection.

Do not connect this fixture to a dimmer pack.

LED light emission. Risk of eye injury.
Do not look straight at the fixture´s LEDs during operation. The intense light beam may damage your eyes.

Keep compustible materials at least 20 cm away from the fixture.

If the fixture has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.

Avoid brute force when installing or operating the fixture.

The fixture was designed for both indoor and outdoor use. This fixture must not be used for underwater installation.

When choosing the installation spot, please make sure that the fixture is not exposed to extreme heat or dust.

Avoid using the unit in locations subject to possible impacts.

The fixture body never must be covered with cloth or other materials.

Only operate the fixture after having checked that the housing is firmly closed and all screws are tightly fastened.

Make sure that the area below the installation place is blocked when rigging, derigging or servicing the fixture.

Do not block the front objective LEDs with any object when the fixture is under operation.

The fixture becomes very hot during operation. Allow the fixture to cool approximately 30 minutes prior to manipulate with it.

Operate the fixture only after having familiarized with its functions. Do not permit operation by persons not qualified for operating the fixture. Most damages are the result of unprofessional operation!

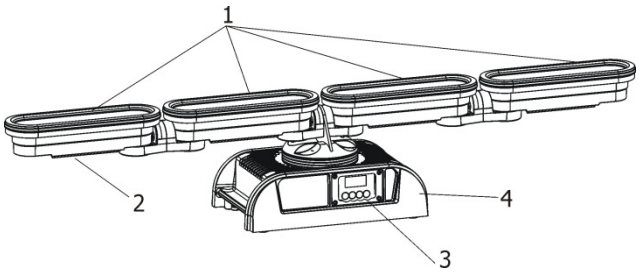
Do not attempt to dismantle or modify the unit.

Please consider that unauthorized modifications on the fixture are forbidden due to safety reasons!

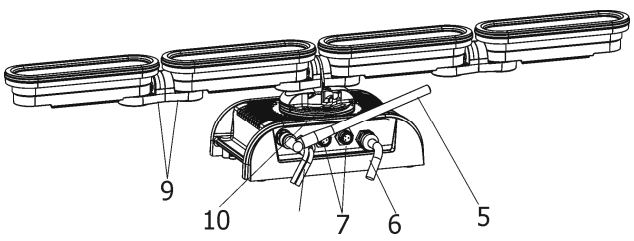
Please use the original packaging if the fixture is to be transported.

If this device will be operated in any way different to the one described in this manual, the product may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to dangers like short-circuit, burns, electric shock etc.

2. Fixture exterior view



1. LED modules
2. Bases of LED modules
3. Control board
4. Base

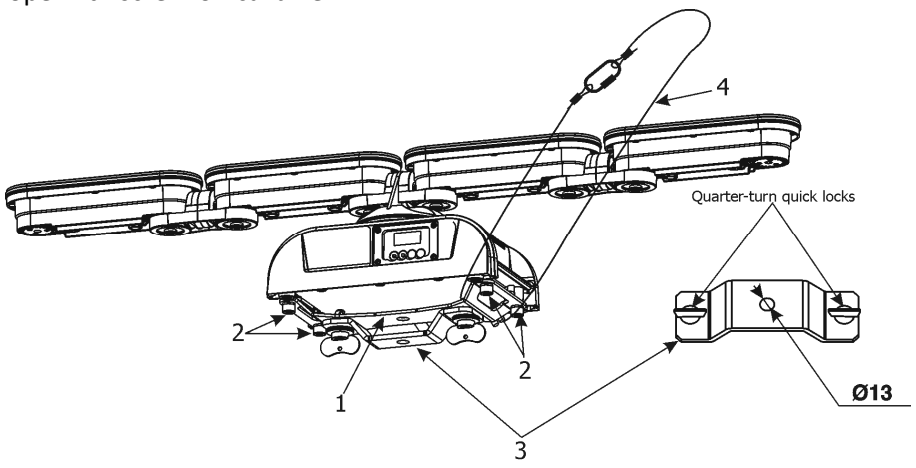


5. Antenna (Wireless DMX version only)
6. Power cord
7. LED modules supply connectors
8. DMX IN/OUT
9. Adjustable joints
10. Pan lock

3. Installation

3.1 Rigging the fixture

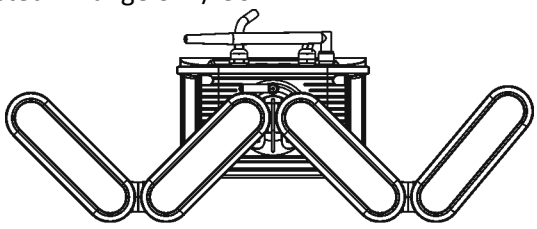
The CityFlex 48 can be rigged in any orientation on a truss without altering its operation characteristics. Installation on the truss allows the mounting adapter (1) fastened to the fixture base with four bolts M8 (2) and the Omega holder (3) for fastening clamp.Pull through the safety rope (4) under the mounting adapter and over the trussing system.
For overhead use, always install a safety rope (4) that can hold at least 10 times the weight of the fixture. You must only use safety rope with screw-on carbine.



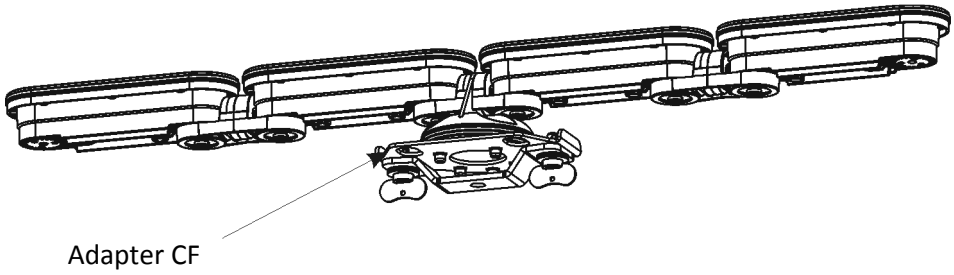
Ensure that the structure (truss) to which you are attaching the fixture is secure

Caution: Fixtures may cause severe injuries when crashing down! If you have doubts concerning the safety of a possible installation, do not install the device and consult installation with an expert.

Each of the four LED modules can be adjusted to many positions by 10° steps and this way the CityFlex can create different patterns. The pan can be adjusted in range of +/-50°.



There is a possibility to install the LED modules and the base separately on the truss. In this case, you need adapter CF (it is not standard part of delivery, must be order extra) for rigging LED modules on the truss. The length of the connection cables between the base and the LED modules has to be specified in order.



If the LED modules and the base are installed separately on the metal structure (LED modules and the base are galvanic interconnected), <u>the LED modules fall under protection class I and must be grounded</u> in accordance with all national and local electrical and construction regulations.

In case that LED modules and the base are installed separately on the insulant e.g. wall (LED modules and the base are not galvanic interconnected), the LED modules fall under protection class 3 and do not need to be grounded.

3.2 Connection to the mains

Fixtures must be installed by a qualified electrician in accordance with all national and local electrical and construction codes and regulations.

Install a suitable plug on the power cord, note that the cores in the power cord are colored according to the following table.

Core (Eu)	Core (US)	Connection	Plug Terminal Marking
Brown	Black	Live	L
Light blue	White	Neutral	N
Yellow/Green	Green	Earth	⏚

This device falls under class one and must be grounded!

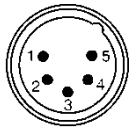
3.3 DMX 512 connection

The fixture is equipped with two 5-pin XLR connectors for DMX input/output. Only use a shielded twisted-pair cable designed for RS-485 and 5-pin XLR- connectors in order to connect the controller with the fixture or one fixture with another.

Wiring of the XLR connectors:

DMX output
XLR socket (rear view):

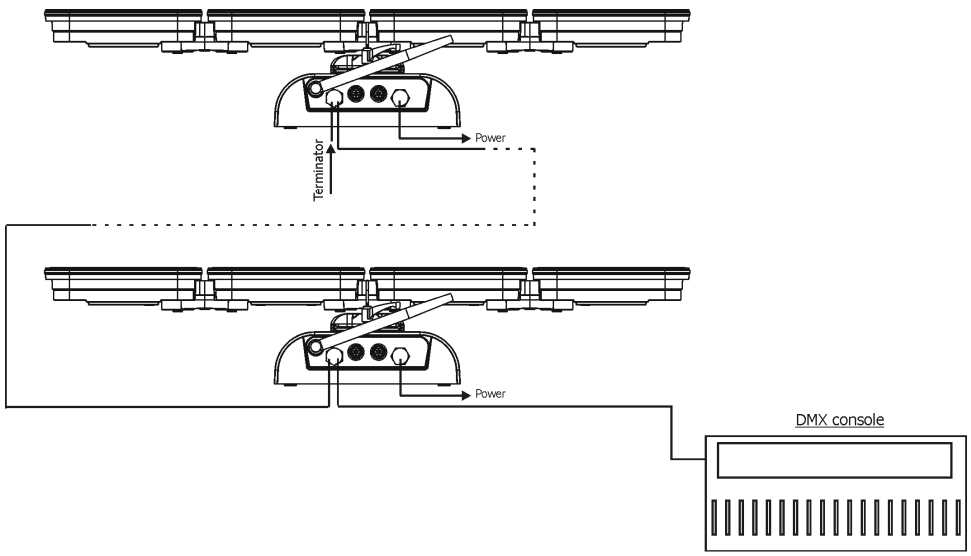
DMX input
XLR plug (rear view):



1 – Shield **2** - Signal (-) **3** - Signal (+) **4** – Not connected **5** – Not connected

To build a DMX chain

1. Connect the DMX output of the controller directly with the DMX input of the first fixture in the DMX chain.
2. Connect the DMX output of the first fixture in the DMX chain with the DMX input of the next fixture.
3. Always connect the DMX output with the input of the next fixture until all fixtures are connected.
   Do not overload the link. Max. 32 fixtures may be connected on a DMX link.



Caution: Terminate the link by installing a termination plug in the output of the last fixture. The termination plug is a male 3-pin XLR plug with a 120 Ohm resistor soldered between Signal (–) and Signal (+).

3.4 Wireless DMX operation

The wireless version of the CityFlex 48 is equipped with the Lumen Radio CRMX module and antenna for receiving DMX signal. CRMX module operates on the 2.4 GHz band.

1. Select wireless DMX input from the menu **PErS** (PErS-->dM.IM.-->dM.UL.).

2. To link the fixture with DMX transmitter.
   The fixture can be only linked with the transmitter by running the link procedure at DMX transmitter .
   After linking , the level of DMX signal (0-100 %) is displayed in the menu
   item "r**.InF**" (SPEC-->rAdI.--> r.InF.)

3. To unlink the fixture from DMX transmitter.
   The fixture can be unlinked from receiver via the menu item " r**.UnL**." (SPEC-->rAdI.--> r.UnL.).

4. CityFlex 48 - DMX protocol

Version 1.4 (Software version 2.8 and higher)

Mode/Channel							Value	Function	Type of control
1	2	3	4	5	6	7			
1	-	-	1	-	-	-	0-255	**Red - all pixels** Red LEDs saturation control (0-100%)	proportional
2	-	-	2	-	-	-	0-255	**Green - all pixels** Green LEDs saturation control (0-100%)	proportional
3	-	-	3	-	-	-	0-255	**Blue - all pixels** Blue LEDs saturation control (0-100%)	proportional
4	-	-	4	-	-	-	0-255	**White - all pixels** White LEDs saturation control (0-100%)	proportional
-	1	1	-	-	1	1	0-255	**Red pixel 1** Red LED saturation control (0-100%)	proportional
-	2	2	-	-	2	2	0-255	**Green pixel 1** Green LED saturation control (0-100%)	proportional
-	3	3	-	-	3	3	0-255	**Blue pixel 1** Blue LED saturation control (0-100%)	proportional
-	4	4	-	-	-	-	0-255	**White pixel 1** White LED saturation control (0-100%)	proportional
-	-	-	-	-	-	4	0-255	**Dimmer 1** Dimmer intensity from 0-100%	proportional
-	5	5	-	-	4	5	0-255	**Red pixel 2** Red LED saturation control (0-100%)	proportional
-	6	6	-	-	5	6	0-255	**Green pixel 2** Green LED saturation control (0-100%)	proportional
-	7	7	-	-	6	7	0-255	**Blue pixel 2** Blue LED saturation control (0-100%)	proportional
-	8	8	-	-	-	-	0-255	**White pixel 2** White LED saturation control (0-100%)	proportional
-	-	-	-	-	-	8	0-255	**Dimmer 2** Dimmer intensity from 0-100%	proportional
-	9	9	-	-	7	9	0-255	**Red pixel 3** Red LED saturation control (0-100%)	proportional
-	10	10	-	-	8	10	0-255	**Green pixel 3** Green LED saturation control (0-100%)	proportional
-	11	11	-	-	9	11	0-255	**Blue pixel 3** Blue LED saturation control (0-100%)	proportional
-	12	12	-	-	-	-	0-255	**White pixel 3** White LED saturation control (0-100%)	proportional

Mode/Channel							Value	Function	Type of control
1	2	3	4	5	6	7			
-	-	-	-	-	-	12	0-255	**Dimmer 3** Dimmer intensity from 0-100%	proportional
-	13	13	-	-	10	13	0-255	**Red pixel 4** Red LED saturation control (0-100%)	proportional
-	14	14	-	-	11	14	0-255	**Green pixel 4** Green LED saturation control (0-100%)	proportional
-	15	15	-	-	12	15	0-255	**Blue pixel 4** Blue LED saturation control (0-100%)	proportional
-	16	16	-	-	-	-	0-255	**White pixel 4** White LED saturation control (0-100%)	proportional
-	-	-	-	-	-	16	0-255	**Dimmer 4** Dimmer intensity from 0-100%	proportional
-	17	17	-	-	13	17	0-255	**Red pixel 5** Red LED saturation control (0-100%)	proportional
-	18	18	-	-	14	18	0-255	**Green pixel 5** Green LED saturation control (0-100%)	proportional
-	19	19	-	-	15	19	0-255	**Blue pixel 5** Blue LED saturation control (0-100%)	proportional
-	20	20	-	-	-	-	0-255	**White pixel 5** White LED saturation control (0-100%)	proportional
-	-	-	-	-	-	20	0-255	**Dimmer 5** Dimmer intensity from 0-100%	proportional
-	21	21	-	-	16	21	0-255	**Red pixel 6** Red LED saturation control (0-100%)	proportional
-	22	22	-	-	17	22	0-255	**Green pixel 6** Green LED saturation control (0-100%)	proportional
-	23	23	-	-	18	23	0-255	**Blue pixel 6** Blue LED saturation control (0-100%)	proportional
-	24	24	-	-	-	-	0-255	**White pixel 6** White LED saturation control (0-100%)	proportional
-	-	-	-	-	-	24	0-255	**Dimmer 6** Dimmer intensity from 0-100%	proportional
-	25	25	-	-	19	25	0-255	**Red pixel 7** Red LED saturation control (0-100%)	proportional
-	26	26	-	-	20	26	0-255	**Green pixel 7** Green LED saturation control (0-100%)	proportional
-	27	27	-	-	21	27	0-255	**Blue pixel 7** Blue LED saturation control (0-100%)	proportional

Mode/Channel							Value	Function	Type of control
1	2	3	4	5	6	7			
-	28	28	-	-	-	-	0-255	**White pixel 7** White LED saturation control (0-100%)	proportional
-	-	-	-	-	-	28	0-255	**Dimmer 7** Dimmer intensity from 0-100%	proportional
-	29	29	-	-	22	29	0-255	**Red pixel 8** Red LED saturation control (0-100%)	proportional
-	30	30	-	-	23	30	0-255	**Green pixel 8** Green LED saturation control (0-100%)	proportional
-	31	31	-	-	24	31	0-255	**Blue pixel 8** Blue LED saturation control (0-100%)	proportional
-	32	32	-	-	-	-	0-255	**White pixel 8** White LED saturation control (0-100%)	proportional
-	-	-	-	-	-	32	0-255	**Dimmer 8** Dimmer intensity from 0-100%	proportional
-	33	33	-	-	25	33	0-255	**Red pixel 9** Red LED saturation control (0-100%)	proportional
-	34	34	-	-	26	34	0-255	**Green pixel 9** Green LED saturation control (0-100%)	proportional
-	35	35	-	-	27	35	0-255	**Blue pixel 9** Blue LED saturation control (0-100%)	proportional
-	36	36	-	-	-	-	0-255	**White pixel 9** White LED saturation control (0-100%)	proportional
-	-	-	-	-	-	36	0-255	**Dimmer 9** Dimmer intensity from 0-100%	proportional
-	37	37	-	-	28	37	0-255	**Red pixel 10** Red LED saturation control (0-100%)	proportional
-	38	38	-	-	29	38	0-255	**Green pixel 10** Green LED saturation control (0-100%)	proportional
-	39	39	-	-	30	39	0-255	**Blue pixel 10** Blue LED saturation control (0-100%)	proportional
-	40	40	-	-	-	-	0-255	**White pixel 10** White LED saturation control (0-100%)	proportional
-	-	-	-	-	-	40	0-255	**Dimmer 10** Dimmer intensity from 0-100%	proportional
-	41	41	-	-	31	41	0-255	**Red pixel 11** Red LED saturation control (0-100%)	proportional
-	42	42	-	-	32	42	0-255	**Green pixel 11** Green LED saturation control (0-100%)	proportional

Mode/Channel							Value	Function	Type of control
1	2	3	4	5	6	7			
-	43	43	-	-	33	43	0-255	**Blue pixel 11** Blue LED saturation control (0-100%)	proportional
-	44	44	-	-	-	-	0-255	**White pixel 11** White LED saturation control (0-100%)	proportional
-	-	-	-	-	-	44	0-255	**Dimmer 11** Dimmer intensity from 0-100%	proportional
-	45	45	-	-	34	45	0-255	**Red pixel 12** Red LED saturation control (0-100%)	proportional
-	46	46	-	-	35	46	0-255	**Green pixel 12** Green LED saturation control (0-100%)	proportional
-	47	47	-	-	36	47	0-255	**Blue pixel 12** Blue LED saturation control (0-100%)	proportional
-	48	48	-	-	-	-	0-255	**White pixel 12** White LED saturation control (0-100%)	proportional
-	-	-	-	-	-	48	0-255	**Dimmer 12** Dimmer intensity from 0-100%	proportional
-	-	49	5	-	-	49	 0 1-255	**CT0 (All pixels)** No function Colour temperature correction from 20000K to 2400K	 step proportional
-	-	50	6	1	-	50	 0 1-2 3 4-5 6 7-9 10-12 13-15 16 17-55 56 57 - 95 96 97 – 134 135 136 - 174 175 176 -214 215 216 - 246 247	**Colour macros (All pixels)** No function White 2700 K White 2700 K (Halogen lamp mode) White 3200 K White 3200 K (Halogen lamp mode) White 4200 K White 5600 K White 8000 K **Blue** (Blue=full, Red+Green+White=0) Red=0, Green→up,Blue =full, White=0 **Light Blue** (Red=0, Green=full, Blue =full, white=0) Red=0, Green=full, Blue→down, White=0 **Green** (Red=0, Green=full, Blue =0, White=0) Red→up, Green=full, Blue=0, White=0 **Yellow** (Red=full, Green=full, Blue=0,White=0) Red=full, Green→down, Blue=0, White=0 **Red**(Red=full, Green=0, Blue=0, White=0) Red=full, Green=0, Blue→up, White=0 **Magenta** (Red=full, Green=0, Blue=full, White=0) Red→down, Green=0, Blue=full, White=0 **Blue** (Red=0, Green=0, Blue=full, White=0)	 step step step step step step step step step proportional step proportional step proportional step proportional step proportional step proportional step

Mode/Channel							Value	Function	Type of control
1	2	3	4	5	6	7			
							248	Rainbow effect with fade time	step
							249	Rainbow effect without fade time	step
							250	Colour effect 1	step
							251	Colour effect 2	step
							252	Colour effect 3	step
							253	Colour effect 4	step
							254	Colour effect 5	step
							255	Colour effect 6	step
								Shutter/ Strobe (All pixels)	
							0-31	Shutter closed	step
							32-63	Shutter open	step
							64-95	Strobe-effect from slow to fast	proportional
							96-111	Rainbow &Pixels effects speed, slow→fast	proportional
-	-	51	7	-	-	51	112-127	Rainbow &Pixels effects speed, fast→slow ,(opposite)	proportional
							128-143	Opening pulses in sequences slow--> fast	proportional
							144-159	Closing pulses in sequences fast --> slow	proportional
							160-191	Shutter open	step
							192-223	Random strobe-effects from slow to fast	proportional
							224-255	Shutter open	step
-	-	52	8	2	-	52		**Master Dimmer (All pixels)**	
							0 - 255	Dimmer intensity from 0% to 100%	proportional

5. Control menu map

Default settings=Bold print

Menu Level 1	Menu Level 2	Menu Level 3	Menu Level 4	Menu Level 5	Menu Level 6
A001	dM.Ad.	001-512			
InFo	Poti.	totL			
		rSEt			
	DM.In.	rEd1	0-255		
		:			
		dinr	0-255		
	VErS.				
PErS	dM.Pr.	Mod.1			
		Mod.2			
		Mod.3			
		Mod.4			
		:			
		Mod.7			
	dM.I.M	**dM.Ur.**			
		dM.UL.			
	dISP.	d.On	**On**, Off		
		d.Int.	30,60,**100**		
		turn			
	dotS	FInd	d.000-d.012		
		Sort	Dt.1-dt.12	Stor	
		F.tin.	OFF		
			1-25.5		
		CurU	0-25.5		
		Upd	U000-U012		
	In.Po.	rEd1	0-255		
		:			
		dinr	0-255		

Menu Level 1	Menu Level 2	Menu Level 3	Menu Level 4	Menu Level 5	Menu Level 6
		Stor.			
	C.c.Mo.	**On**,Off			
	dFSE	SEt			
MAn.M.	rEd.1				
	:				
	Uh.12				
tESt					
St.AL.	Auto	**Off**			
		tESt			
		PrG.1			
		:			
		PrG.3			
	PLAY	tESt			
		PrG.1			
		:			
		PrG.3			
	Edit	PrG.1	St.01	P.End	1-32
		:	:	rEd1	0-255
		PrG.3	St.32	:	:
				S.tim.	0-25.5 sec
				CoPY	
SPEC.	rdML				
	rdMH				
	rAdI	r.InF.	No.LI (0-100)		
		r.UnL.			
	C.cAL	rEd	0-255		
		GrEn	0-255		
		bLUE	0-255		

Menu Level 1	Menu Level 2	Menu Level 3	Menu Level 4	Menu Level 5	Menu Level 6
		UhIt	0-255		
		Stor.			
	uPd.				

6. Fixture menu

The control panel menu allows to set the fixture according to your needs, obtain information on its operation, test its various parts and lastly program it, if it has to be used in a Stand-alone mode.

The four control buttons on the front have the following functions:
↙ **- ESCAPE** button-leaves menu without saving changes.
↵ **- ENTER** button- enters menu, confirms adjusted values and leaves menu.
▲ **- UP** and ▼ - **DOWN** buttons - move between menu items on the same level, sets values.

After switching the fixture on, the fixture display shows the current DMX address:

Use the UP/DOWN buttons to scroll through the various menu items. To select desired item, press the ENTER.

6.1 Fixture Address

Use this menu to set the DMX address of the fixture or set the fixture as a Master (Slave).
dM.Ad. --- **DMX addressing**. Select this submenu to set a DMX start address.
To set a DMX address.

1. Use the UP/DOWN buttons to find " **A001**" menu.
2. Press the ENTER button.
3. Use the UP/DOWN buttons to select desired start address.
4. Press the ENTER button to confirm the choice.

Note: After switching on, the CityFlex 48 will automatically detect whether DMX 512 data is received or not. If there is no data received at the DMX input, the display will start to flash with actually set address.

6.2 Fixture information

Use this menu to read useful information about the fixture status.
To display desired information.

1. Use the UP/DOWN buttons to find the " InFo" menu.
2. Press the ENTER button.
3. Use the UP/DOWN buttons to select the required menu item.
4. Press the ENTER button to confirm the choice.

Po.ti. --- **Power On Time.** Use the menu item to read the number of operation hours for each LEDs operating mode.

totL - the function shows the total number of the operation hours in the “FuLL” mode since the CityFlex 48 has been fabricated.
rESEt - the function shows the number of the operation hours that the CityFlex 48 has been powered on in the “FuLL” mode since the counter was last reset. In order to reset this counter to 0 you have to press and hold the UP and DOWN buttons and at the same time press the ENTER button.

DM.In.---**DMX values**. Select this function to read DMX values of each channel received by the fixture.

VErS. ---**Software Versions.** Select this function to read the software version of the fixture processor.

6.3 Personality

Use this menu to modify the CityFlex 48 operating behaviour.

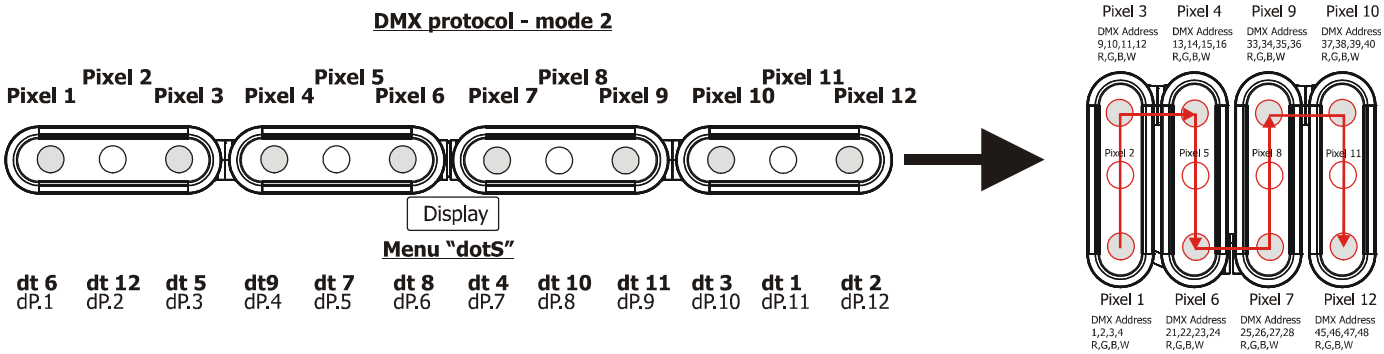
dM.Pr. --- **DMX preset**. Select this menu item to set a desired DMX mode. Please refer to the chapter "DMX protocol" for detail description of each DMX mode.
Note: Selected DMX preset affects number of items in the menu”dM.In” and ”MAn.M”.

dM.I.M. --- **DMX input**. Select this menu item to select desired DMX input:
dM.Ur. --- Wire DMX.
dM.UL. --- Wireless DMX

DiSP. --- **Display adjusting**. This function allows you to change the display settings.
d.On --- this function allows you to keep the display on or to turn off automatically 2 minutes fter last pressing any button on the control panel.
d.Int. --- select this function to adjust the display intensity (30-min.,100-max.).
turn --- select this function to turn the display by 180°.

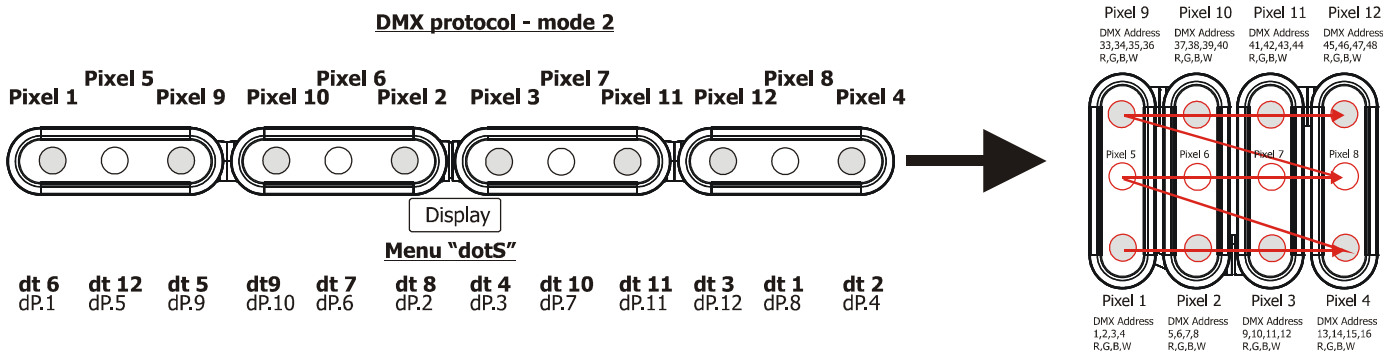
dotS. --- **Pixels configuration**. The function allows you to set configuration of pixels.
FInd --- this function checks all pixels and the message “donE” is displayed after the procedure.
Sort --- this function allows to assign to each pixel its desired position (DMX address) in the LED modules.
After entering “Sort”, item “dt.I” (dot 1) will appear. Press Enter and the position of dot 1 will start flashing. Use Up/Down buttons to select desired pixel position (“dP.1” – “dP.12”). Pixel position influences its DMX address-see pictures in examples below. Repeat the procedure for pixels 2-12. After setting positions for all pixels, select “Stor.” to save current pixel sorting.
Note: If message “nonE” appears in the menu “Sort”, run “ Find” function again**.**

Example 1 – **Default (factory) pixel ordering**- pixels are sorted inline

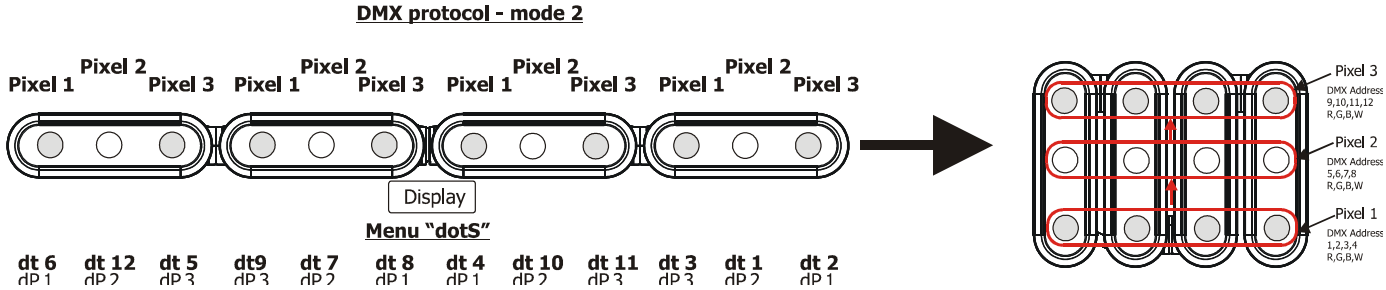


Position of flashing pixels “dt1-dt12” depends on ID of each pixel and can be different for different fixtures.

Example 2 – Pixels are sorted in three rows



Example 3 – Four pixels are merged into "one" pixel in each row
If two or more pixels have the same pixel position ("dP.1-d.P12") they will have the same DMX address.

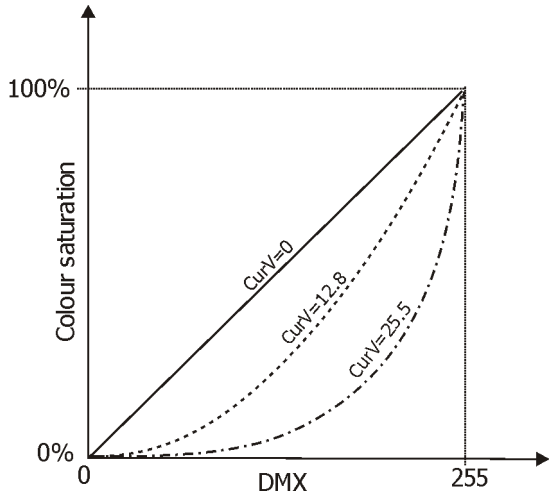


Only DMX channels 1-12 are used for control this pixel configuration. If all pixels have the same pixel position, the fixture will behave as one pixel.

F.tin. --- Max. fade time. Select this menu item to set a desired max. fade time (0-25.5 sec.). This adjusted fade time influences fade of RGBW and dimmer during DMX operation:
If time between two receiving DMX values is > than fade time set in the item "F.tin.", the entire adjusted fade time will be used.
If time between two receiving DMX values is < than fade time set in the item "F.tin.", the adjusted fade time will be reduced to fill entire time between the two receiving DMX values.
e.g. "F.tin."=2sec. and fixture has received Red=0 DMX, after 5 seconds will receive Red=255 DMX. It means, that red will go to full intensity during 2 seconds.
"F.tin".=8 sec. and fixture has received Red=0 DMX, after 5 seconds will receive Red=255 DMX. It means, that red will go to full intensity during 5 seconds. (Max, fade time is reduced from 8 sec. to 5 sec.).

Note: the value adjusted in the item F. tim. will not influence fade time set in the program steps.

CurV --- Saturation curve. This menu item allows you to select desired running of colour saturation. You can select 255 colour saturation runnings in all. The value .0 corresponds linear curve, the value 128 corresponds exponential curve with index 1.9 and last value 25.5 corresponds exponential curve with index 2.6.



Upd. --- Pixels update. Besides the main control electronics in the fixture base every pixel contains its own control driver. After standard software updating of the control electronics via the menu "SPEC", this pixels update has to be performed if some software changes are required in the pixel drivers.

In.Po. --- **Init effect positions.** Use this function to set all effects to the desired positions to which they will move after switching the fixture on (if DMX is not being received). Confirm adjusted values by pressing the item "Stor".

C.C.Mo. --- **Colour calibration mode.** If the functin is on, the white output from the fixture (and also mixed colours) is more uniform. Each colour is dynamically corrected according to the value set in the menu "C.CAL" (SPEC-> C.CAL).

dF.SE. --- **Default Settings .**The menu item sets all fixture parameters to the default (factory) values.

6.4 Manual mode

Use this menu for control the fixture without DMX console.
Note: The number of items depends on the selected DMX mode in the menu "dM.Pr" (PerS—>dM.Pr.)

6. 5 Test sequences

Use this menu to run demo-test sequences without an external controller, which will show you some possibilities of using the CityFlex 48.

6.6 Stand-alone setting

The fixture is not connected to the controller but can execute pre-set programs.

Auto. --- Automatic playback. This function allows you to select the program which will be played after switching the fixture on. Selected program will be played continuously in a loop.

1. Use the UP/DOWN buttons to find " **St.AL.**" menu.
2. Press the ENTER button.
3. Use the UP/DOWN buttons to select " **Auto**" item.

4. Press the ENTER button.
5. Use the UP/DOWN buttons to select desired program.
6. Press the ENTER button to confirm the choice.

PLAY --- Playing program. By enter to this menu a complete overview of all programs is offered, from which the program to be run can be selected.

1. Use the UP/DOWN buttons to find " **St.AL.**" menu.
2. Press the ENTER button.
3. Use the UP/DOWN buttons to select desired program.
4. Press the ENTER button. The selected program runs in a loop.

Edit --- Editing a program. The fixture offers 3 freely editable programs (PrG.1-PrG.3) each up to 32 steps. Every program step includes a fade time-the time taken by the step´s channel status to reach the desired level and a step time-the total time occupied by the step in the program.
E.g. If "F.tim."=5 second and "S.tim."=20 second, effects will go to the desired position during 5 seconds and after that they will stay in this position for 15 seconds before going to the next prog. step

1. 1. Use the UP/DOWN buttons to find " **St.AL.**" menu and press the ENTER button.
2. Use the UP/DOWN buttons to select "**Edit**" menu and press the ENTER button.
3. Use the UP/DOWN buttons to select a program you want to edit (PrG.1-PrG.3 and press ENTER button.
4. Use the UP/DOWN buttons to select a desired program step ("St.01" - "St.32") and press ENTER button.
5. Use the UP/DOWN buttons to select a channel you want to edit and press the ENTER button.
   List of editable items:
   "P.End" - a total number of the program steps (value 1-32). This value should be set before start Programming (e.g. if you want to create program with 10 steps, set P.End=10).
   "rEd.1" - red pixel 1 saturation
   "GrE.1" - green pixel 1 saturation
   "bLu.1" - blue pixel 1 saturation
   "Whi.1" - white pixel 1 saturation
   "dim.1" – pixel 1 dimmer
   :
   "rE.12" - red pixel 12 saturation
   "Gr.12" - green pixel 12 saturation
   "bL.12" - blue pixel 12 saturation
   "Wh.12" - white pixel 12 saturation
   "di.12" – pixel 12 dimmer
   "Cto" - colour temperature correction
   "MACr" - colour macros
   "Stro." - a strobe, shutter
   "dinr" - a master dimmer
   "F.tin." - a fade time, (0-25.5) seconds
   "S.tin." - step time, value (0-25.5) seconds
   "COPY". – this item duplicates the current prog. step to the next prog. step. The item "P.End" is increased automatically.
6. Use the UP/DOWN buttons to set a DMX value of the channel and then press the ENTER button.
7. Use the UP/DOWN buttons to select next channel and press the ENTER button.
8. After having set all channels in the current program step, press the MODE button to go by one menu level back and select another program step.

6.7 Special functions

rdML --- **Code**.This menu item shows the first part of the RDM identification code.

rdMH --- **Code**. This menu item shows the second part of the RDM identification code.

rAdI --- **Wireless status .** The menu serves for reading of the wireless operation status (only for Wireles DMX version).

r.InF. --- **Wireless DMX information.** The menu item shows level of received signal in %. If the fixture is not linked to the transmitter, "**no.LI**" is displayed.

r.UnL. --- **Wireless DMX unlink.** The item serves for unlinking the fixture from transmitter

C.CAL --- Colour calibration. The menu serves for adjusting of LEDs saturation to achieve colour temperature of 5600K for white output.

rEd - a red LEDs saturation fine adjustment
GrEn - a green LEDs saturation fine adjusment
bLuE - a blue LEDs saturation fine adjustment
UhIt - a white LEDs saturation fine adjustment

Calibration of the colour saturations via the control board

1. Let the fixture lights one hour at R,G,B,W channels in full intensity.
2. Disconnect DMX controller from the fixture , open shutter and dimmer and set the Colour Macros channel to DMX=10 (white 5600K). Aim the light beam on the lux meter (e.g. Minolta CL-200 Chroma meter) which is placed at distance of cca 2.5 m from the fixture
3. Set the menu item "C.C. Mo." to On (PErS-> C.C. Mo -> On).
4. Enter the menu "C.CAL".
5. Use the [up arrow] and [down arrow] to find desired colour and touch it to enter the fine effect adjustment screen.
6. By means of the „rEd, GrEn, bLuE and UhIt" items adjust the 5600K colour temperature as exactly as possible ($\Delta u'v' = 0$).
7. After adjusting 5600K colour temperature, select „Stor"to save all adjusted values and reset the fixture.

uPd.M. --- **Updating mode**. The menu item allows you to update software in the fixture via either serial or USB port of PC.

The following are required in order to update software:

- PC running Windows 95/98/2000/XP or Linux
- DMX Software Uploader
- Flash cable RS232/DMX No.13050624 (if you want to use a serial port of PC)
- Robe Universal Interface (if you want to use an USB port of PC)

Note1: Software update should execute a qualified person. If you lack qualification, do not attempt the update yourself and ask for help your ROBE distributor.

Note 2: DMX address, programs 1-3 and all items in the menu "PErS" will be set to their default values.

To update software in the fixture:

I. Installation of the DMX Software Uploader.

1. DMX Software Uploader program is available from the ROBE web site at WWW.robe.cz.
2. Make a new directory (e.g. Robe_Uploader) on your hard disk and download the software into it.
3. Unpack the program from the archive.

II. Fixture software updating.

1. Determine which of your port is available on your PC and connect it:
   - with the DMX input of the fixture if you using the flash cable RS232/DMX
   - with the DMX input of the Robe Universal Interface if you using the USB cable.

   Disconnect the fixture from the other fixtures in a DMX chain. Turn both the computer and the fixture on. Make sure the lamp is switched off (only if the fixture involves a lamp).
2. Switch the fixture to the updating mode:
   1 Use the UP/DOWN buttons to find "**SPEC.**" menu.

2 Press the ENTER button.
3 Use the UP/DOWN buttons to select " **uPd.**" item.
4 Press the ENTER button
5 Use the UP/DOWN buttons to select " **yES**" option
6 Press the ENTER button

Note: If you do not want to continue in software update, you have to switch off and on the fixture to escape from this menu.

3. We recommend to cancel all running programs before start of the Software Uploader.

4. Run the Software Uploader program. Select desired COM (or Robe Universal Interface)and then click on the Connect button.

If the connection is OK, click on the Start Uploading button to start uploading. It will take several minutes to perform software update. If the option "Incremental Update" is not checked, all processors will be updated (including processors with the same software version).

If you wish to update only later versions of processors, check the Incremental Update box.

Avoid interrupting the process. Update status is being displayed in the Info Box window.

When the update is finished, the line with the text "The fixture is successfully updated'will appear in this window and the fixture will reset with the new software.

Note 1: In the case of an interruption of the upload process (e.g. power cut), the fixture keeps the updating mode and you have to repeat the software update again.

Note 2: If software update involves also update of software for each pixel, run the item "Upd" In the "dotS" menu (PerS → dotS → Upd).

7. RDM

This fixture is ready for RDM operation.RDM (Remote Device Management) is a bi-directional communications protocol for use in DMX512 control systems, it is the new open standard for DMX512 device configuration and status monitoring.

The RDM protocol allows data packets to be inserted into a DMX512 data stream without adversely affecting existing non-RDM equipment. By using a special „Start Code," and by complying with the timing specifications for DMX512, the RDM protocol allows a console or dedicated RDM controller to send commands to and receive messages from specific moving lights.

RDM allows explicit commands to be sent to a device and responses to be received from it.

The list of commands for CityFlex 48 is the following.

Parameter ID	**Discovery command**	**SET command**	**GET command**
DISC_UNIQUE_BRANCH	*		
DISC_MUTE	*		
DISC_UN_MUTE	*		
DEVICE_INFO			*
SUPPORTED_PARAMETERS			*
SOFTWARE_VERSION_LABEL			*
DMX_START_ADDRESS		*	*
IDENTIFY_DEVICE		*	*
DEVICE_MODEL_DESCRIPTION			*
MANUFACTURER_LABEL			*

DEVICE_LABEL		*	*
SENSOR_DEFINITION			*
SENSOR_VALUE			*
DISPLAY_LEVEL		*	*
DEVICE_RESET		*	
DMX_PERSONALITY		*	*
DMX_PERSONALITY_DESCRIPTION			*
STATUS_MESSAGES			*
STATUS_ID_DESCRIPTION			*
DEVICE_HOURS			*

Please, see the Robe Universal Interface user manual for detail description of RDM operation.

8. Technical specifications

Power supply

- Electronic auto-ranging
- Input voltage: 100 - 240V AC, 50-60 Hz
- Fuse: T 5A
- Max. power consumption: 120W

Optic & Effects

- Light source: 4 LED modules, each with 3x Cree MC-E RGBW multichip
- Optical system: 25°
- RGBW colour mixing
- Built-in colour macros
- Adjustable strobe sequences
- Lumen maintenance:

Channels @ full intensity	**L_{70}**
One LED channel	92,000
Two LED channels	90,000
Three LED channels	88,000
All LED channels	87,000

L_{70} = 70% maintenance of initial lumen output in hours

Electronics

- Control panel: 4-digit LED display and four control buttons
- Control: USITT DMX 512 (RDM support)
- DMX protocol modes: 7 (4,48,52,8,2,52 controll channels)
- Operations modes: DMX, Stand-alone, Master/Slave
- Manual control of all effects via control panel

- 3 user editable programs each up to 32 steps

Wireless DMX/RDM module (only for CityFlex Wireless DMX)

- Compliance with USITT DMX-512 (1986 & 1990) and 512-A
- Full DMX fidelity and frame integrity
- Auto sensing of DMX frame rate and frame size
- <5ms DMX latency
- Operational frequency range of 2402-2480 MHz
- Producer: LumenRadio

Strobe

- Strobe effect with variable speed (max. 20 flashes per second)
- Pre-programmed random strobe pulse-effects

Dimmer

- Smooth 16-bit dimming from 0 - 100 %

Connection

- DMX data In: 1.3m long cabel with 5-pin XLR (male)
- DMX data Out: 1.3m long cabel with 5-pin XLR (female)
- Power: 1.2m long power cabel without plug
- LED modules supply: 2x Chogori CGRBB-03RFFS-SC8001 (female) and 2 x Chogori CGRBB-03BMMA-SL8001 (male)

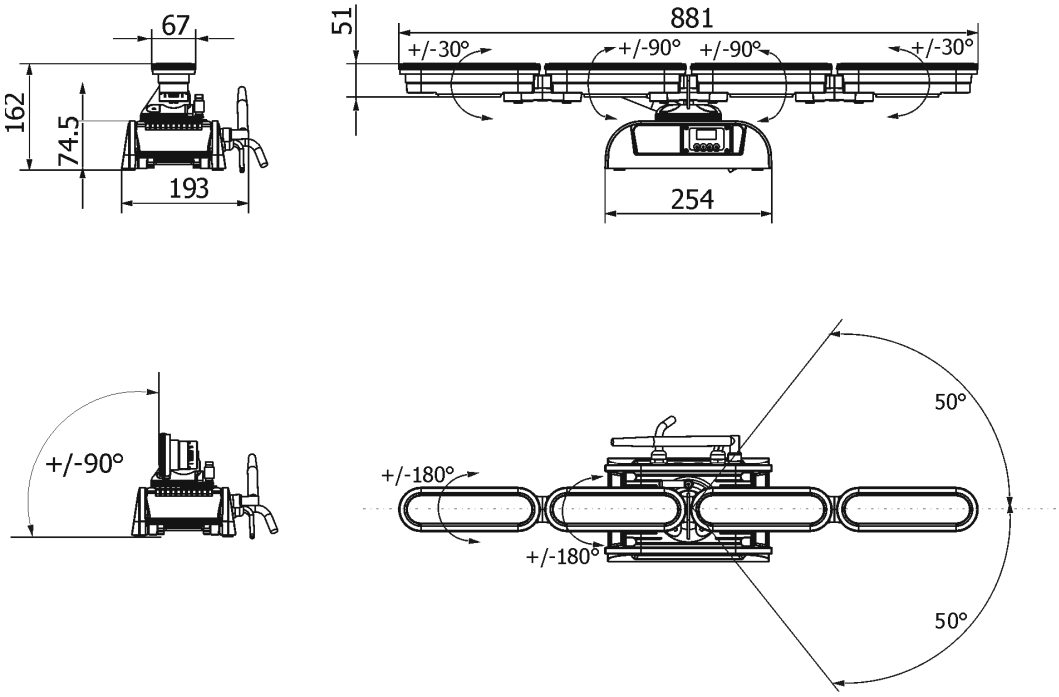
Rigging

- Via omega holder

Temperatures

- Maximum ambient temperature: 40° C
- Maximum housing temperature: 80° C

Dimensions (mm)



Weight

- 6.5 kg

Protection factor

- IP 65

Included items

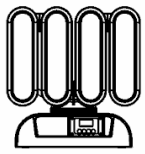
- 1 x CityFlex 48
- 1 x Adapter for Omega holder (No. 99012673)
- 1 x Omega holder (No. 99010420)
- 1 x User manual

Optional accessories

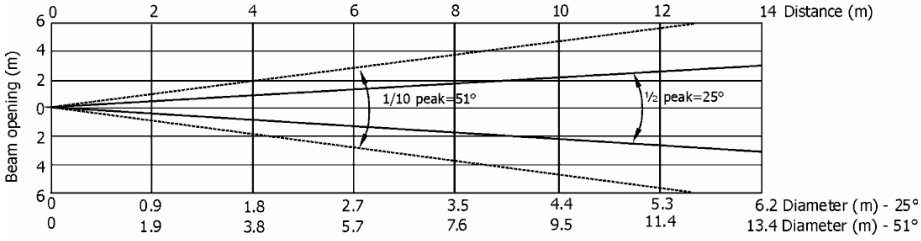
- Adapter CF (No. 1098 0107)
- Flash cable RS232/DMX (No. 13050624)

Beam distribution

Strips position

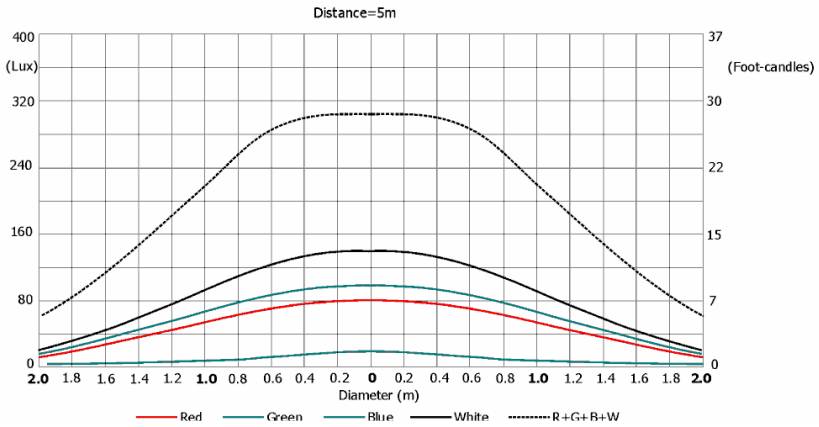


25° Lens Array



Distance (m)	2	4	5	6	8	10	12	14	
Red	500/47	125/12	80/7	56/5	31/3	20/2	14/1.3	10/1	Intensity (center) Lux/Footcandles
Green	594/55	148/14	95/9	66/6	37/3	24/2	17/1.5	12/1	
Blue	113/11	28/3	18/1.7	13/1.2	7/0.7	4.5/0.4	3/0.3	2.3/0.2	
White	844/78	211/20	135/13	94/9	53/5	34/3	23/2	17/1.6	
R+G+B+W	1950/181	488/45	312/29	217/20	122/11	78/7	54/5	40/4	

Illuminance distribution



Note: By reason of the fast-moving development of LED technology, later products may have better light parameters than previous products.

9. Cleaning and maintenance

DANGER !
Disconnect from the mains before starting any cleaning or maintenance work

Rinse off loose dirt with low pressure water spray. Wash the housing with a soft brush or sponge and a mild, non-abrasive washing detergent. Rinse it.
There are no serviceable parts inside the device.
Maintenance and service operations are only to be carried out by a qualified person.
Should you need any spare parts, please use genuine parts.

Specifications are subject to change without notice.

January 30, 2013